Proof Without Words: Arithmetic Mean of Two Means
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**Theorem.** Given two positive numbers \(a\) and \(b\), let \(A\), \(G\), and \(R\) denote their arithmetic mean, geometric mean, and root mean square, respectively. It follows that

\[
A \geq \frac{R + G}{2}.
\]

**Proof.**

\[d^2 = A^2 - G^2 = R^2 - A^2\]

\[A = \sqrt{\frac{R^2 + G^2}{2}} \geq \frac{R + G}{2}\]

**Summary.** We provide a visual proof that the arithmetic mean of two positive numbers is greater or equal than the arithmetic mean of the geometric mean and the root mean square.

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